

The Case | Do not forget nails

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Figure 1 | Nail inspection.

A previously healthy, 47-year-old Chinese man presented with a 3-month history of worsening insomnia, dizziness, and lethargy. Six months before, he had enrolled into a weight reduction program using a compound weight-loss formula. One month before admission, he was diagnosed with a sleep disorder and treated by zolpidem 10 mg per day integrated with aromatherapy, chiropractic manipulation, and bioenergetic therapy. On physical exami-

nation, he was normotensive and the only abnormality was seen in his fingernails (Figure 1). Laboratory studies showed hemoglobin 7.2 g/dl, sodium 131 mmol/l, potassium 6.8 mmol/l, blood urea nitrogen 146 mg/dl, creatinine 18.9 mg/dl, and normal liver function. Dipstick urinalysis revealed mild proteinuria and 12–16 leukocytes per high-power field, without bacteriuria, hematuria, or cast formation.

**What is the characteristic abnormality seen in his fingernail?
What is the clinical diagnosis?**

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The Diagnosis | Half-and-half nails from end-stage aristolochic acid nephropathy

Fingernails showed diffuse, dull whitening of the proximal nail beds, instead of the normal light amber-pink translucence, and distal pink transverse bands parallel to the free edge of the nail plates. On constricting venous return from the nail bed, the distal bands became redder and only slight pinkness was induced in the proximal area, and the contrast between the two zones remained sharply demarcated. These findings were characteristic of half-and-half nails, necessitating a comprehensive survey for advanced renal disease. Histopathological studies and detection of aristolochic acid in his herbal slimming mixture, using high-performance liquid chromatography, confirmed diagnosis of end-stage aristolochic acid nephropathy. However, maintenance hemodialysis failed to correct his pseudoleuconychia completely.

Abnormal fingernails may be pathognomonic of certain systemic diseases. Across the clinical spectrum of systemic onychopathies, the half-and-half nail is an occasional, but specific, manifestation in chronic renal failure.¹ Half-and-half nails (Lindsay's nails), first described in 1963 by Bean, typically present as red, pink, or brown transverse distal bands occupying 20–60% of the total nail length, with

the remaining proximal portion exhibiting a dull whitish ground-glass appearance. The margin between the distal and proximal zones, at times irregular, is generally parallel to the distal or free margin of the nail. In previous studies, the prevalence of half-and-half nails varied between 15 and 50.6%.² It is most common in fingernails, but sometimes can be observed in toenails. There is no known correlation between the nail band width and the severity or duration of renal failure, age, sex, proteinuria, or other clinical parameters. In some reports, it has disappeared after successful renal transplantation, but is usually unchanged by dialysis therapy. The mechanism by which half-and-half nails develop in chronic renal failure remains unclear.^{3,4}

REFERENCES

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